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Platform Integration

SAS® 360 Match partners with supply-side platforms (SSPs) and data management platforms (DMPs) to integrate bidding, ad serving, and audience data in a seamless, efficient process. The integration allows the SSP to bid on ad requests that can be accepted or declined based on floor prices.

Integrations with DMPs automate loading of the platform’s audience data into SAS® 360 Match, which can then be used in targeting.

SSP Integration

Using an SSP integration offers several advantages: page load speeds are improved, count discrepancies are reduced, and passbacks are not required. All communication, whether it is the initial bid request or the ad payload, is handled directly between SAS® 360 Match and the SSP.

Each SSP integration requires four areas of configuration: partners, placements, biddable tiers, and back-end configuration. Configure the size and site mappings for the SSP using the Partners tab in SAS® 360 Match. This document lists the specific information about mappings for each SSP that SAS® 360 Match supports.

Placements offer extended control for SSP integration. Multiple placement entities can be created, allowing many different targeting combinations to be used. In addition, a placement can be configured to use multiple SSPs. Different floor prices can be set for each SSP by each biddable tier.

Each tier can be independently configured to solicit bids from SSPs. When the Biddable option on a tier is enabled, SSPs are solicited for bids when an ad request is received. An additional tier option, Private Marketplace, is detailed in the Rubicon section below.

Each SSP also requires settings to be configured by SAS Technical Support. Before proceeding with partner and placement configuration in SAS® 360 Match, contact SAS Technical Support at support@sas.com to complete the necessary prerequisites.

Bidding

Once a partner and placement are configured, SAS® 360 Match begins soliciting bids when an ad request is received. An SSP is contacted only after a matching, traditional (non-placement) flight has been selected to serve on a tier that has the Biddable option enabled. This ensures that if the request to the SSP times out, or if the bid does not meet the requirements, an ad response can still be sent to the visitor. If no matching, traditional flight is found, the SSP is not contacted even on a biddable tier.

Once those criteria have been met, the floor price configured for the tier is sent as part of the bid request. However, if the tier is based on CPM or eCPM rates, the CPM or eCPM rate for the selected flight is sent to the SSP as the floor price if the rate is greater than the placement floor price. This means that the SSP’s bid needs to exceed both the placement floor and CPM or eCPM rate of the selected flight. If the bid meets or exceeds the floor price, then the SSP’s ad
response is served to the visitor. Otherwise, the engine serves the already selected flight from that tier or moves on to the next tier if there was no qualified flight to serve.

Any placement matching the request and meeting the floor price of the tier is served over any other flights that would have been served.

**Currency Conversion**

Regardless of the base currency, placement floor prices and flight CPM or eCPM rates are converted to U.S. dollars when bids are solicited from SSPs. The SSP’s bid response is converted from U.S. dollars to the base currency for comparison to the floor price or CPM or eCPM and for logging purposes.

Specify the currency conversion rates in the **Currency** panel on the **Admin** tab.

**Serial Bidding**

A duration server, or DSERVER, request can engage in bidding when it is properly configured. A DSERVER bid is only solicited for placements when its device type is set to video.

The bid request contains the maximum duration of the length of time in seconds that is left to fill for the request, subject to the restrictions placed on the duration by the bidder tokens `OPENRTB.IMP.VIDEO.MINDURATION` and `OPENRTB.IMP.VIDEO.MAXDURATION`.

For example, if 90 seconds remain to be filled and the `OPENRTB.IMP.VIDEO.MAXDURATION` is 120, then a max of 90 is requested from the bidder. However, if the `OPENRTB.IMP.VIDEO.MAXDURATION` is 30, then a max of 30 seconds is requested.

If bidding is done from a tier that prioritizes cost per second (CPS), the bids compete on a CPS basis rather than on absolute price. For example, assume that a 30-second ad paying $6.00 is the nominally selected ad. A bid providing a 60-second ad for $9.00 would not win, because it pays 15 cents per second, while the nominal ad pays 20 cents per second.

If bidding is done from a non-CPS-prioritized tier, then the bid would win in the example above because its $9.00 price beats the $6.00 of the nominal ad.

An affirmative bid response must be VAST-compliant and include the XML `<Duration>` tag that provides the length of the ad in the VAST-specified format (HH:MM:SS).

If a bid is successful, its duration is subtracted from the total time that is left to fill. If more time is left to fill, another impression is selected, just as with any other nonbidding impression selected in this type of call.

The bidding behavior is similar in a non-DSERVER request that includes a `DURATION` tag that targets video ads. In this case, the bid request can provide a minimum and maximum duration to match the requested duration, as long as it is within the `OPENRTB.IMP.VIDEO.MINDURATION` and `OPENRTB.IMP.VIDEO.MAXDURATION` settings.

As with the DSERVER example above, the bid competes on a CPS or absolute basis, depending on the tier prioritization.
SSP Cookies

For some SSPs, a visitor ID stored in a cookie is required for the SSP to respond with a bid. When an ad request is received, SAS® 360 Match determines whether the SAS® 360 Match cookie contains the relevant SSP’s visitor ID. If it does, a bid can occur. If it does not, SAS® 360 Match appends a beacon to the ad response to solicit an ID from the SSP. On the next ad request, if the ID is present, a bid then can be requested from the SSP.

Most SSPs allow anonymous bidding if no visitor cookie is present.

Logging and Reporting

If a bid response from an SSP meets the criteria required to be served, the ad payload from the SSP is sent to the visitor in response to their ad request. An impression is counted as soon as the response is sent to the visitor. Clicks are not logged for SSPs.

Impressions are logged for each SSP under a single advertiser, campaign, flight, and creative unique to that partner. Each of these entities is hidden in the UI, but each entity is selectable and searchable in report interfaces.

In any reporting interface, SSP data can be specified by using the following naming convention:

- Advertiser – aiMatch_<SSP>_Integration_Advertiser
- Campaign – aiMatch_<SSP>_Integration_Campaign
- Flight – aiMatch_<SSP>_Integration_Flight
- Creative – aiMatch_<SSP>_Integration_<size>

A creative exists for each SSP and size combination. Note that because a single flight exists for each SSP, all impressions appear to have served from the “default” tier rather than the tier that served the placement.

The BI Reports tool includes a data cube, “Bidsum,” which can be accessed by opening the “Bidsum_Empty” analyzer view in BI. This data source includes bid information for each SSP. A bid is logged every time a bid request is made regardless of the response from the SSP. If a bid did not win, the reason why is logged as well. BI data is updated nightly up to include the previous day’s data.

Supported SSPs

SAS® 360 Match supports several SSPs. Each SSP has specific configuration requirements. See the section on Extended Functionality to identify additional configuration options for each SSP that SAS Technical Support can help you set up.

AppNexus

Before proceeding with partner and placement configuration, please provide the following items to SAS Technical Support to enable AppNexus integration:

- AppNexus member ID
These items are mapped as follows for partner and placement configuration:

- Placement Key: AppNexus placement code
- Partner Site Mappings: AppNexus placement code
- Partner Size Mappings: AppNexus dimensions

**Rubicon**

Before proceeding with partner and placement configuration, please provide the following items to SAS Technical Support to enable Rubicon integration:

- Rubicon account ID

These items are mapped as follows for partner and placement configuration:

- Placement Key: Rubicon zone ID
- Partner Site Mappings: Rubicon site ID(s)
- Partner Size Mappings: Rubicon size ID(s)

**PubMatic**

Before proceeding with partner and placement configuration, please provide the following items to SAS Technical Support to enable PubMatic integration:

- PubMatic publisher ID
- PubMatic site ID

These items are mapped as follows for partner and placement configuration:

- Placement Key: PubMatic ad tag ID
- Multiple SAS® 360 Match sizes can be mapped to a single PubMatic ad tag ID
- Multiple SAS® 360 Match sites can be mapped to a single PubMatic site ID

**Index**

Before proceeding with partner and placement configuration, please provide the following items to SAS Technical Support to enable Index integration:

- Index publisher ID
Partner Configuration

Site and size mappings for SSPs are configured under the **Partners** tab in SAS® 360 Match. These values are used in bid requests to the SSPs. When SAS® 360 Match receives an ad request and selects a placement, the site and size from the SAS® 360 Match ad request is translated using the values specified in the partner configuration, and then used in the bid request.

Once the SSP is configured and enabled by SAS Technical Support, navigate to the specific SSP subtab under the **Partners** tab in SAS® 360 Match. Under the **Size Mappings** section for the SSP, identify which sizes defined in SAS® 360 Match to use with the SSP integration. Retrieve the corresponding value from the SSP and enter it in the matching size field.

The same needs to be completed for site values. Navigate to the **Site Mappings** section for the SSP and enter the corresponding value from the SSP for each SAS® 360 Match site value that will be used with the integration.

Finally, a target can be specified in the **Target** section for the SSP. This is useful if there is universal targeting that should be applied to all placements using the SSP. Be mindful of targeting conflicts. If a placement is targeted to “site=abc” and the partner target contains “Site equals 123”, content is unable to serve.

Once this initial configuration has been completed, create placements to enable the integration.

Placements

Placements provide the configuration of targeting, SSP participation, and floor prices needed for integration. Placements allow multiple placement entities to be created, which allows for many different targeting combinations to be used. In addition, placements can be configured to use multiple SSPs. Different floor prices can be set for each SSP by each biddable tier. Configure placements in the **Targeting** tab in SAS® 360 Match.
Placement Properties and Targeting

Specify a target, sites, and a size in the Properties section under the Placements subtab. Targeting operates in much the same way as it does with flights. Any site values specified here are applied as targeting to the placement, and are concatenated with any targets specified as well.

Ensure there are no conflicting statements. For example, if a target that is included has a rule “Site Equals A” and site “B” is specified in the Sites field, the placement would not be able to serve. It is a best practice to exclude any site targeting in targets used for placements.

For each unique combination of targeting, a separate placement is needed. For example, if different floor prices are needed for “Site Equals A” and “Site Equals B”, then two placements would be needed.

Any sites or sizes specified should be mapped to a corresponding value for the SSP in the Partners tab in SAS® 360 Match.

The Device type should be selected when configuring the placement. This setting controls which fields are sent in bid requests for some SSPs.

The Default floor price is used initially to populate the floor prices for each SSP and biddable tier in the Floor Prices section. If the default is later changed, it will not affect the floor prices specified in the Floor Prices section even if they have not been changed from the default value.

Parent Placements

A placement can specify a parent placement in the Properties section. If a placement has a parent specified, the parent is requested in parallel with the child placement. A placement specified as a parent can also have its own parent specified, which also is requested in parallel. All placements in this chain are requested in parallel until either a parent placement with no other parent is encountered, or a placement already requested is encountered.

Parent placements are requested regardless of whether the targeting matches the ad request. The original placement is still required to match the ad request targeting, but subsequent parents are not. This allows for “masked” bid requests to be made. A placement with a high floor price could have a parent placement that has a lower floor price and different targeting. The SSP might decline to fulfill the higher floor price but might fulfill the parent’s lower floor price.

Network Participation

If used with a placement, a placement key must be configured in the Network Participation section. A key can be specified for each site added to the placement, which are defined in the Properties section. The placement key values are sourced from the SSP, as described in the Supported SSPs section in this document.
The Site override fields in the Network Participation section allow a custom value to be used for the site parameter in bid requests to SSPs. Without a site override value specified, the mapping defined in the Partners tab is used in the bid request.

Configuring Floor Prices and Tiers

Before floor prices can be configured, a tier needs to be set as “Biddable” to be eligible to serve a placement. Create or edit a tier in the Tiers subtab under the Traffic tab in SAS® 360 Match and check the Biddable option.

The behavior of floor prices sent to SSPs can be controlled using the Bid floor options. The default behaviors for floor prices that are detailed in the Bidding section of this document can be overridden using the following options:

- **Flight eCPM** – The eCPM of the flight selected to compete against the placement is sent as the floor price to the SSPs.
- **Placement default** – The floor price specified for the placement is sent.
- **Higher of** – The higher value of either the flight eCPM or the placement is sent.
- **Lower of** – The lower value of either the flight eCPM or the placement is sent.

If any of the options involving eCPM are selected, and if a flight selected to serve does not have a CPM rate specified, the floor rate sent to the SSPs is “0”.

An additional option, Private Marketplace (PMP), is used for Rubicon integrations. Private Marketplace can be used with Biddable on the tier is turned on.

Use the Rubicon Deal Prioritization options to fine-tune how each type of private marketplace deal competes. Private marketplace deals from Rubicon offer the following controls: Private Auction Deals, Preferred Deals, Private Deals, or Guaranteed Deals. The functionality of Guaranteed Deals is not yet available.

Enable Private Marketplace on the tier to assign one of the following behaviors to each deal type:

- **Compete w/all demand** – The deal is not considered any differently and competes normally with real-time bids (RTBs).
- **Trump RTB demand** – The deal supersedes non-PMP (RTB) bids.
- **Trump all demand** – The deal supersedes all other bid types and flight eCPMs.

Once a tier is biddable, floor prices can be configured for each biddable tier by SSP on the Floor Prices section in the Placements subtab.

The floor price specifies the lowest acceptable bid price from the configured SSPs. If a bid is lower than what is specified, the bid is rejected.
Extended Functionality

There are many configuration options available for each SSP that can be set up only by SAS Technical Support.

Settings

Contact SAS Technical Support to enable or alter any of the following options.

AppNexus

- Allow anonymous visitors – This option controls whether anonymous visitors (visitors with no AppNexus ID) can make bid requests.

- Support alternate sizes – When enabled, this option populates the “format” field in the bid request with any additional sizes specified in the SAS® 360 Match ad request.

- Support multiple sizes – This option controls whether SAS® 360 Match ad requests containing multiple sizes should serve AppNexus placements.

- Identify tier – The name of the tier selected to serve can be provided to AppNexus in the bid request.

Rubicon

- Bid parallel sizes – If an ad request to SAS® 360 Match contains multiple sizes, this option makes multiple bid requests in parallel for each size.

- Extra targeting information – Additional targeting information can be passed to Rubicon in bid requests. This is placed in the “target” object of the bid request, sometimes referred to as Rp_Inventory. Values in the SAS® 360 Match ad request can be passed in the bid request to Rubicon using this feature.

- Support alternate sizes – When enabled, this option populates the “alt_size_id” field in the bid request with any additional sizes specified in the SAS® 360 Match ad request.

- Support multiple sizes – This option controls whether SAS® 360 Match ad requests containing multiple sizes should serve Rubicon placements.

- Support parent placements – This option controls parent placement functionality for Rubicon.

- Identify tier – The name of the tier selected to serve can be provided to Rubicon in the bid request.

- Do not send floor prices – You can choose not to send a floor price so that Rubicon sends its best bid on every request.

- Count viewed impressions – You can embed a pixel in your bid response that will enable you to count the number of times the response is rendered.
- Use placement size – Use the size assigned to a placement as the primary size in a bid request.

**PubMatic**

- Extra targeting information – Additional targeting information can be passed to PubMatic in bid requests. This is placed in the “dctr” field of the bid request. Values in the SAS® 360 Match ad request can be passed in the bid request to PubMatic using this feature.

- Support alternate sizes – When enabled, this option populates the “multisize” parameter in the bid request with any additional sizes specified in the SAS® 360 Match ad request.

- Support multiple sizes – This option controls whether SAS® 360 Match ad requests containing multiple sizes should serve PubMatic placements.

- Suppress frame parameters – This option controls whether the “inIframe” and “frameName” parameters are included in bid requests to PubMatic.

- Identify tier – The name of the tier selected to serve can be provided to PubMatic in the bid request.

- Use placement size – Use the size assigned to a placement as the primary size in a bid request.

- Pass device ID – Send unique device IDs for mobile devices to PubMatic. To do this, provide the unique device ID in the targeting path information of the ad request. For more information, see PubMatic Device Parameters in Additional Parameters.

- Pass platform information – Identify ad requests that are formatted for mobile applications. SAS® 360 Match can configure an ad request to notify PubMatic that the content is intended for mobile platforms.

**Index**

- Use placement size – Use the size assigned to a placement as the primary size in a bid request.

**Additional Parameters**

You can send additional parameters to SSPs in bid requests. Contact SAS Technical Support to configure the mapping between the keys that you will provide and the corresponding parameters for the SSPs.

**AppNexus, Rubicon, and Index**

AppNexus, Rubicon, and Index implementations use OpenRTB, which is a protocol to provide details to SSPs in bid requests. SAS® 360 Match supports a subset of these parameters.

Specify the value for a parameter in the targeting path information using the key=value format. For example, once SAS Technical Support has configured `videopos` to map to
IMP.VIDEO.POS, path information that contains /videopos=top results in the IMP.VIDEO.POS parameter being assigned the value of top.

You can pass the following user privacy attributes to the SSPs in the bid request:

- **device.dnt**: Signals if the Do Not Track flag is set. A passed value of 0 indicates tracking is allowed. A value of 1 indicates tracking is not allowed.

- **device.lmt**: Signals if the limit ad tracking flag is set. A passed value of 0 indicates tracking is unrestricted. A value of 1 indicates tracking is limited.

- **regs.ext.coppa**: Signals if the request is subject to the Children's Online Privacy Protection Act (COPPA). A passed value of 0 indicates that the request is exempt from COPPA regulations. A value of 1 indicates that the request is subject to COPPA regulations.

- **regs.ext.gdpr**: Signals if the request is subject to GDPR. A passed value of 0 indicates the request is exempt from GDPR regulations. A value of 1 indicates the request is subject to GDPR regulations.

- **regs.ext.us_privacy**: Signals if the request is subject to the California Consumer Privacy Act (CCPA). A passed value of 0 indicates the request is exempt from CCPA regulations. A value of 1 indicates the request is subject to CCPA regulations.

- **site.mobile** – Signals if the site is optimized for mobile devices. A value of 0 indicates the site is not optimized for mobile devices. A value of 1 indicates the site is optimized. **Note**: This attribute is available for Index only.

- **user.ext.consent**: The GDPR consent string that contains the data structure developed by the GDPR Consent Working Group under IAB Europe.

You can pass the following attributes to the SSPs in the bid request based on the device that is specified in the placement:

<table>
<thead>
<tr>
<th>Device</th>
<th>Parameter (Object.Attribute)</th>
</tr>
</thead>
<tbody>
<tr>
<td>App</td>
<td>APP.ID</td>
</tr>
<tr>
<td></td>
<td>APP.NAME</td>
</tr>
<tr>
<td></td>
<td>APP.BUNDLE</td>
</tr>
<tr>
<td></td>
<td>APP.VER</td>
</tr>
<tr>
<td></td>
<td>APP.DOMAIN</td>
</tr>
<tr>
<td></td>
<td>APP.PRIVACYPOLICY</td>
</tr>
<tr>
<td></td>
<td>APP.STORERATING</td>
</tr>
<tr>
<td></td>
<td>APP.STOREURL</td>
</tr>
<tr>
<td></td>
<td>APP.APPSTOREID</td>
</tr>
<tr>
<td></td>
<td>APP.KEYWORDS</td>
</tr>
<tr>
<td></td>
<td>DEVICE.IFA</td>
</tr>
<tr>
<td></td>
<td>DEVICE.IFA</td>
</tr>
<tr>
<td></td>
<td>DEVICE.DNT</td>
</tr>
</tbody>
</table>

PubMatic

These are the parameters that SAS® 360 Match can provide to PubMatic:

- **UDID** – Unique device identifier.
- **UDIDTYPE** – Type of value provided in the UDID parameter. Possible values are defined at https://community.pubmatic.com/display/PA/Mobile-specific+Parameters#Mobile-specificParameters-MobileApplication-specificParameters.
- **UDIDHASH** – Type of algorithm used for hashing the value provided in the UDID parameter. Possible values are defined at https://community.pubmatic.com/display/PA/Mobile-specific+Parameters#Mobile-specificParameters-MobileApplication-specificParameters.
- **GDPR** – Signals if the request is subject to GDPR regulations. A passed value of 0 indicates the request is exempt from GDPR regulations. A value of 1 indicates the request is subject to GDPR regulations.
- **GDPR_CONSENT** – The GDPR consent string that contains the data structure developed by the GDPR Consent Working Group under IAB Europe.
- **CPLIST** – List of comma-separated IDs of providers that have consent from its users in the European Economic Area to use their personal data to personalize ads. This is applicable only to Google Exchange Bidding requests.

Provide the values for the parameters in the targeting path information using the key=value format (for example, /udid=<id>/gdpr=1/cplist=<id>,<id>). Use supertags to provide UDIDTYPE and UDIDHASH values. You can also use the key=value format.

For example, if the iphone supertag is defined as /udidtype=1/udidhash=2 and the targeting path information contains /udid=<id>/supertag=iphone, the resulting bid request would be /udid=<id>/udidtype=1/udidhash=2.
By default, SAS® 360 Match supports the PubMatic's Ad Decisioning API. Contact SAS Technical Support if you want to use PubMatic's OpenRTB integration API instead.

**DMP Integration**

Integrations with DMPs enable you to automatically convert audience segments into tag values in SAS® 360 Match. In most cases, the segment values for a given visitor are automatically provided to SAS® 360 Match through a cookie synchronization beacon. This enables flights in SAS® 360 Match to be targeted to audience segments and the visitors assigned to those segments.

Audience segments are updated and translated into SAS® 360 Match tag values nightly as part of the overnight processing sequence.

**DMP Cookies**

For all supported DMPs except for Krux, a cookie synchronization beacon in the form of JavaScript code is appended to each ad response. The synchronization beacon retrieves the audience segments assigned to a visitor from the DMP and provides it to SAS® 360 Match in the form of a cookie. A visitor's ad requests automatically contain their assigned segment values.

The Krux integration differs from the other DMP integrations because there is no cookie synchronization beacon. You can use a SAS® 360 Match snippet to build rules about synchronizing cookies with Krux.

**Supported DMPs**

SAS® 360 Match supports several DMPs. Each DMP has specific configuration requirements.

**AdForm**

Provide the following items to SAS Technical Support to enable AdForm integration:

- AdForm publisher ID
- AdForm data provider ID
- AdForm API user name and password
- SAS® 360 Match tag name for audience segment values

**Krux**

Krux provides a mapping of visitor IDs and audience segments that is downloaded from Krux nightly as part of the overnight processing sequence. The audience segments are then translated into tag values. When a Krux visitor ID is received in a SAS® 360 Match ad request, the visitor ID is obtained from the data downloaded from Krux and the corresponding segment values are automatically included as part of the visitor's ad requests.
Provide the following items to SAS Technical Support to enable Krux integration:

- Krux S3 folder path
- Krux visitor ID ad request parameter
- SAS® 360 Match tag name for audience segment values

Lotame

Provide the following items to SAS Technical Support to enable Lotame integration:

- Lotame publisher ID
- SAS® 360 Match tag name for audience segment values